

October 2, 2001

**Dengue Fever Medical Alert:  
An Update**

Dear Health Care Provider:

The Hawaii Department of Health (DOH) today received confirmation that dengue virus type 1 was isolated from two Maui residents of Nahiku in East Maui. Both residents had no recent travel history. It is the same serotype that is circulating in the French Polynesia epidemic. Earlier this year, dengue virus type 3 was isolated from a resident who had traveled to the Philippines.

**The Maui Outbreak.**

To date, there have been 19 locally-transmitted CDC confirmed cases, all from East Maui (Nahiku to Hamoa). In addition, there are over 100 residents suspected of possibly having contracted the disease. There is also presumptive evidence that the outbreak is spreading beyond East Maui.

**Statewide Imported Cases.**

In addition to the Maui outbreak, since January there have been 27 cases of **imported** dengue fever reported to the DOH. Cases have been identified in returning residents from Hawaii, Maui, Oahu and Kauai including one fatality which was indirectly related to dengue fever. Cases were exposed in the Philippines, Bali, Thailand, Costa Rica, the Society Islands, and American and Western Samoa.

**New Statewide Cases.**

Possible autochthonous cases have been identified in Kona on the Big Island, in four locations on Oahu, and in Anahola on Kauai. Confirmatory laboratory results are pending on all of these cases.

**The Disease.**

Dengue fever is an acute mosquito-transmitted viral disease characterized by high fever, severe headache, retro-orbital pain, myalgias, arthralgias, nausea/vomiting, and a transient macular to maculopapular rash. Patients may show a leukopenia and thrombocytopenia. Hemorrhagic manifestations are rare with first infections, but occur with increasing frequency in second infections with another serotype. Although rare, even first infections may produce severe

disease, so physicians are encouraged to provide careful assessment of blood pressure and hydration status of patients with fever, headache, bone and joint pains, especially if they reside on Maui or indicate recent travel to areas with dengue. The incubation period ranges from 3-14 days, while duration of illness ranges from 5-7 days. Immunity to the homologous serotype is lifelong, while susceptibility remains for infections with the other known serotypes.

### **Role of Health Care Providers!**

The DOH is asking all health care providers in the State to be on the alert for possible dengue fever cases. Please do the following when a case of dengue fever is suspected:

1. Draw a red-topped tube of blood for serologic testing. Please request that the laboratory split the serum sample, sending one aliquot to the DOH laboratory on your island, and the other aliquot to the clinical laboratory of your choice. You will receive test results from the clinical laboratory first. The DOH will send the other aliquot to the Centers for Disease Control who will conduct serologic testing as well as virus isolation studies.
2. Request a complete blood count.
3. Immediately **telephone** the DOH office on your island to report the possible case. The patient's name, address, work address, telephone numbers, age, sex, travel history, clinical signs, onset date and sample date should all be provided.
4. Ill patients should be instructed to stay indoors until fever disappears to prevent further mosquito bites. Patients with active dengue fever may become a source of infection for other mosquitoes, and subsequently other people.
5. Encourage patients to take aggressive action to control mosquitoes on their home and business properties. The DOH issued a press release yesterday on that subject. This entails elimination of mosquito breeding sites in standing water such as planters, old tires, pet food and water bowls. Window and door screens should be checked to be sure mosquitoes cannot enter through tears or holes in the screens.
6. For patients planning travel to other tropical and subtropical areas experiencing dengue fever epidemics, please instruct them on the following mosquito prevention activities:
  - Recommend mosquito repellents containing 20-30% DEET.
  - Recommend use of permethrin on clothing as a repellent. If patients will be sleeping under a mosquito net, spray permethrin on the mosquito net.
  - Eliminate mosquito breeding sites from frequented areas, e.g. empty all containers with standing water.
  - Avoid wearing dark clothing. Mosquitoes are attracted to dark clothing.
  - Wear long sleeve shirts/blouses and long pants.

Preventing epidemic spread of dengue fever in the State of Hawaii will require a coordinated community effort to increase awareness of dengue fever, including how to recognize it and how to control the mosquitoes that transmit it. It is our hope that prompt identification and

notification of potential cases will provide us with the information required to successfully control the dengue fever outbreak.

Thank you for your assistance and participation in this community effort.

For more information on mosquito control, please call the Vector Control Branch in Honolulu at 831-6767. For disease reporting and more information, please call the Epidemiology Branch in Honolulu at 586-4586, (808) 933-0912 on Hawaii, (808) 984-8200 on Maui, and (808) 241-3563 on Kauai.

Sincerely yours,

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Communicable Disease Division